

XA-10261
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Masatoshi TAKAHASHI et al.

Intl. Appln. No.: PCT/JP02/08757

Intl. Filing Date: 29 August 2002

Appln. No.: 10/521,553

For: SEMICONDUCTOR PROCESSING DEVICE AND IC CARD

* * *

REPLY TO NOTIFICATION OF DEFECTIVE RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attn: Mail Stop PCT, DO/EO/US

Sir:

In reply to the Notification of Defective Response
mailed August 4, 2006 (copy attached), submitted herewith
is a translation of the original claims.

Also submitted herewith is an English translation of
the International Preliminary Examination Report.

Confirming the recent telephone discussions with Ms.
Karen Williams, of the DO/EO/US, it is understood that the
previously submitted translation of claims is actually a
translation of the Annexes to the International Preliminary

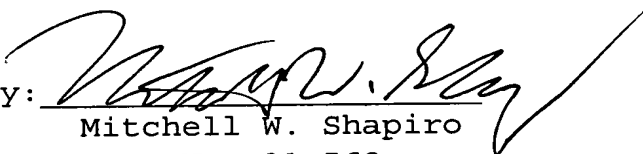
Examination Report. It is respectfully requested that the translation of the Annexes be entered for the purposes of Examination in the U.S. national stage.

The undersigned greatly appreciates Ms. Williams' assistance in this matter and apologizes for any inconvenience to the Office.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

By:


Mitchell W. Shapiro
Reg. No. 31,568

MWS:sjk

Miles & Stockbridge P.C.
1751 Pinnacle Drive
Suite 500
McLean, VA 22102-3833
(703) 903-9000

September 5, 2006



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/521,553	Masatoshi Takahashi	XA-10261

181
 MILES & STOCKBRIDGE PC
 1751 PINNACLE DRIVE
 SUITE 500
 MCLEAN, VA 22102-3833

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AUG 08 2006

**MILES & STOCKBRIDGE P.C.
 TYSONS CORNER**

INTERNATIONAL APPLICATION NO.	
PCT/JP02/08757	
I.A. FILING DATE	PRIORITY DATE
08/29/2002	

CONFIRMATION NO. 2958

371 FORMALITIES LETTER



OC000000019888577

Date Mailed: 08/04/2006

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Copy of the International Application filed on 01/19/2005
- English Translation of the IA filed on 01/19/2005
- Copy of the International Search Report filed on 01/19/2005
- Copy of IPE Report filed on 01/19/2005
- Copy of Annexes to the IPE filed on 01/19/2005
- English Translation of Annexes to the IPE filed on 01/19/2005
- Information Disclosure Statements filed on 10/26/2005
- Oath or Declaration filed on 10/26/2005
- U.S. Basic National Fees filed on 01/19/2005
- Assignment filed on 10/26/2005

DOCKETED
 BY [Signature] ON 8-8-2006
 BY [Signature] ON 8-10
 DUE DATE 9-4-2006
 CALL UP dlf 676

Applicant's response filed 10/26/2005 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 07/26/2005 have not been completed.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Translation of the application into English. The current translation of the application into English is defective as described below. Note a processing fee will be required if submitted later than 30 months from the priority date.
 - The translation is missing the original claims.
- Processing fee of \$130 for providing the translation of the application and/or the Annexes later than 30 months from the priority date (37 CFR 1.492(i)).

SUMMARY OF FEES DUE:

Total additional fees required for this application is **\$-2030** for a Large Entity:

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

- \$130 for English translation surcharge not received in full.

(A previous payment of \$2160 will be applied to the additional fees indicated above.)

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

KAREN M WILLIAMS

Telephone: (703) 308-9140 EXT 213

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/521,553	PCT/JP02/08757	XA-10261

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Masatoshi TAKAHASHI et al.

Intl. Appln. No.: PCT/JP02/08757

Intl. Filing Date: 29 August 2002

Appln. No.: 10/521,553

For: SEMICONDUCTOR PROCESSING DEVICE AND IC CARD

TRANSMITTAL OF INTERNATIONAL
PRELIMINARY EXAMINATION REPORT

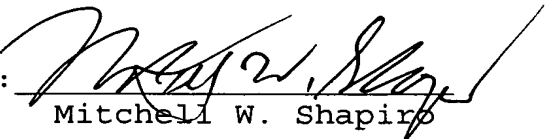
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

An English translation of the International Preliminary
Examination Report from the underlying PCT application is
submitted herewith for the Examiner's convenience.

Respectfully submitted,

MWS:sjk
Miles & Stockbridge P.C.
1751 Pinnacle Drive, Suite 500
McLean, Virginia 22102-3833
(703) 610-8652

By: 
Mitchell W. Shapiro
Reg. No. 31,568

September 5, 2006

Translation

PATENT COOPERATION TREATY

PCT/JP2002/008757



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 310200945971	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2002/008757	International filing date (day/month/year) 29 August 2002 (29.08.2002)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC G06K 19/00, G11C 16/04		
Applicant RENESAS TECHNOLOGY CORP.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>14</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 29 August 2002 (29.08.2002)	Date of completion of this report 07 December 2004 (07.12.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2002/008757

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-46 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 2-9, 12-13, 15-17, 19-27, 30-31 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 1, 10, 11, 14, 18, 28, 29 _____, filed with the letter of _____ 25 August 2003 (25.08.2003)
- ☒ the drawings:
pages _____ 1-46 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 02/08757

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-31	YES
	Claims		NO
Inventive step (IS)	Claims	1-31	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-31	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 2002-164449 A (Hitachi, Ltd.), 7 June 2002, entire text, all drawings,
& US 2002/0074594 A1, & KR 2002/042441 A

Document 2: JP 2001-156275 A (Hitachi, Ltd.), 8 June 2001, paragraph [0049], fig. 17, 18,
& US 6531735 B1, & EP 1085519 A1,
& KR 2001/082522 A

Document 3: WO 2001/084556 A1 (Advanced Technology Materials, Inc.), 8 November 2001, entire text, all drawings, & JP 2003-532968 A,
& US 6400603 B1, & EP 1305805 A1,
& KR 2003/014212 A

Document 4: JP 2000-21183 A (Matsushita Electric Industrial Co., Ltd.), 21 January 2000,
entire text, all drawings

Claims 1 to 31

The inventions described in claims 1 to 31 involve an inventive step relative to documents 1 to 3 newly cited in the international preliminary examination report and document 4 cited in the international search report.

Documents 1 to 3 disclose a non-volatile memory cell having a channel region provided in between a first diffusion layer region and a second diffusion layer region

formed on a substrate, an electric charge storage layer provided on the channel region through a first insulating film, a first gate terminal provided on the electric charge storage layer through a second insulating film, and a second gate terminal which is provided on a second channel region adjacent to the first channel region directly under the electric charge storage layer and is connected through the first gate terminal and a third insulating layer, but none of documents 1 to 3 discloses a feature wherein, without modifying the structure of the non-volatile memory cell, a switching circuit is added, and the constitution is divided into a first non-volatile memory cell wherein stored information is erased in first data length units and a second non-volatile memory cell wherein stored information is erased in second data length units; this feature results in an advantageous effect which is not predictable from the disclosures of documents 1 to 3, namely, that the first non-volatile memory is used for storage of an encryption key, and the second non-volatile memory is used for the storage of a program.

Meanwhile, document 4 discloses the provision of an EEPROM array which can erase in units of bytes and a flash memory array, but the structure of the non-volatile memory cells differs from that of the inventions disclosed in documents 1 to 3, and thus, a person skilled in the art would not easily conceive of combining the inventions disclosed in documents 1 to 3 and document 4.

UNITED STATES PATENT AND TRADEMARK OFFICE
DOCUMENT CLASSIFICATION BARCODE SHEET



STOP ANNOTATION